

PRODUCT DATASHEET

ES-FM-U01-OD104-T2P3NM-001

104 mm Frameless Torque Motor

Ultra Thin Frameless Torque Motors | ES-FM-U01-OD104 Ultra-Thin 104 mm Frameless Torque Motor Series

Product Overview

104 mm outer diameter, 55 mm rotor bore, 14 mm axial stack ultra thin frameless torque motor.

Typical Applications

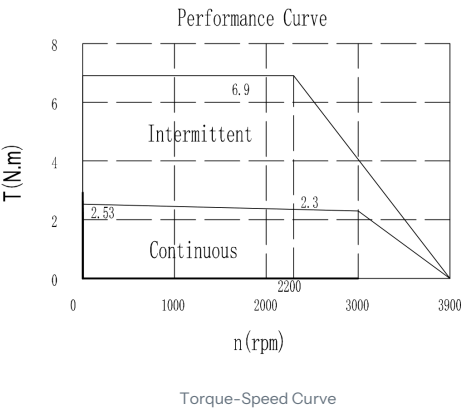
Robot joints | Direct-drive rotary axes | Integrated actuator modules

Configuration Context

DC link: 48 V DC | Temperature sensor: PT1000 temperature sensor with 100 mm lead | Lead wire: 100 mm lead, no connector

Key Specifications

PARAMETER	VALUE	UNIT
Rated Speed	3000	rpm
Continuous Rated Output Power	720	W
DC link voltage	48	V DC
Body Outer Diameter	104	mm
Rotor Inner Diameter	55	mm
Axial Stack Length	14	mm
Lead Wire Configuration	100 mm lead, no connector	
Motor Version	S version	
Number of Poles	16	



Technical Specifications

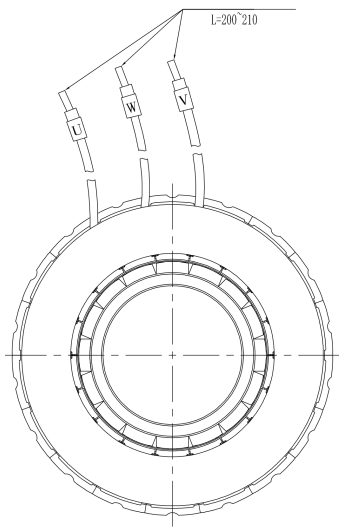
PARAMETER	SPECIFICATION	UNIT
PERFORMANCE		
Rated Speed	3000	rpm
Continuous Rated Output Power	720	W
ELECTRICAL		
DC link voltage	48	V DC
Rated Current	18.9	A
THERMAL		
Temperature Sensor	PT1000 temperature sensor with 100 mm lead	
MECHANICAL		
Body Outer Diameter	104	mm
Rotor Inner Diameter	55	mm
Axial Stack Length	14	mm
INTEGRATION		
Lead Wire Configuration	100 mm lead, no connector	
Number of Pole Pairs	8 pole pairs / 8	
CONFIGURATION		
Motor Version	S version	
ADDITIONAL SPECIFICATIONS		
Number of Poles	16	

Dimensional & Integration Overview

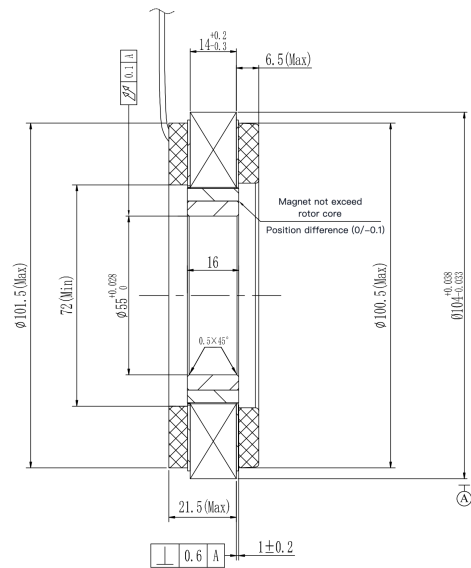
Mechanical Overview

PARAMETER	VALUE	UNIT
Body Outer Diameter	104	mm
Rotor Inner Diameter	55	mm
Axial Stack Length	14	mm

Dimensional Drawings



Mechanical View 1



Mechanical View 2

2D Drawing Dimensions & Callouts

VIEW	FIELD	VALUE
Mechanical View 2	Positional tolerance	Position tolerance 0.1 mm
	Datum A	
	Magnet position requirement	Magnet shall not exceed rotor core
	Position difference	Position difference 0/-0.1 mm
	Shaft diameter	16 mm
	Outer diameter maximum (left side)	Φ101.5 mm Max
	Outer diameter maximum (right side)	Φ100.5 mm Max
	Shaft diameter (with positive tolerance)	Φ55 +0.028/0 mm
	Hole diameter (with bilateral tolerance)	Φ104 +0.038/-0.033 mm
	Axial length minimum	72 mm Min
	Chamfer	0.5 mm X 45°
	Mounting boss height maximum	21.5 mm Max
	Mounting dimension	1±0.2 mm
	Perpendicularity tolerance to datum A	Perpendicularity 0.6 mm relative to datum A

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01 Specifications are subject to change without notice. Verify the current product configuration before final design release.

02 2D drawings, CAD files and integration documentation are controlled documents and are supplied separately on request.